

IN THE SPECIFICATION:

Please insert the following on page 3, after the subheading SUMMARY OF THE INVENTION.

In accordance with one embodiment of the invention there is provided a method of treating tumors or cancer in a human in need of such treatment, which comprises the steps of: (a) administering to the human a compound comprising a pre-selected element; and then (b) irradiating a selected region, in which tumorous or cancerous cells are located, with line emission x-rays of an energy selected to cause emission of Auger electrons from said pre-selected element in a dose effective to disrupt intracellular components of said tumorous or cancerous cells, wherein said compound is rose bengal and said intracellular components are lysosomes.

Please replace the paragraph on page 3, which is numbered [0011] with the following:

[0011] The method of the invention utilizes the emission of Auger electrons from elements, particularly heavy elements, that have been irradiated with x-rays, particularly monoenergetic x-rays tuned to the K-absorption edge of the element. These electrons can deliver concentrated dosages of ionizing radiation of more than  $10^6$  gray (Gy) per activation to localized areas only a few atomic diameters across. By "activation" is meant each separate irradiation when more than one is

done. In one embodiment, a A carrier compound or complex is linked to a chemotherapeutic compound by a bond or a bridging molecule, the resulting linked substance being called herein a transfer compound. The element which can emit ionizing radiation is bound or coupled to the carrier compound, the bridging molecule or the chemotherapeutic compound. Upon administration to a human, the transfer compound will be brought into the vicinity of normal cells and cancer cells. Irradiation of the emitter elements in the locality of a tumor will release Auger electrons resulting in breaking the linkage to the chemotherapeutic compound, thus releasing the chemotherapeutic compound in the vicinity of the tumor and in proximity to the cancerous cells. Transfer compounds which are substantially non-toxic are advantageous since they can be administered throughout the body, without needing to be selective for, or having an affinity to, specific organs or tissues. The substantially non-toxic transfer compounds can be given at whole body dosages and will not be activated until illuminated with x-rays of the appropriate energies. The term "whole body dosage" herein means a dosage which may be distributed through the body and may be given up to the maximum dosage tolerated, i.e. without causing unacceptable toxicity or collateral damage to non-cancerous tissue. The x-ray beam provides the ability to localize the release of Auger electrons to eliminate cancerous or tumorous cells with minimum damage to other normal body tissues. A number of transfer compounds will meet the criteria for low or no toxicity. Compounds having higher toxicity also may be used, e.g. at lower dosages or when the compounds have an affinity for cancerous tissue.

Please replace the paragraph on page 21, numbered [0059] with the following:

[0059] Another compound which may be used as a chemotherapeutic agent in the present invention is rose bengal.